

REMARKS

Claims 1-19 are pending in the application. Claims 1, 3-4 and 7-8 were withdrawn from consideration. No new matter has been presented.

Rejection under 35 USC §112, First Paragraph

Claims 2, 5-6 and 9-19 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The Examiner alleged as follows:

Amended claims 2, 10-11, 13-14 and 16-18 recite a "following area" where the paths of the holding mechanism and the molding die "substantially overlap." While the examiner sees the overlap in figure 4, the examiner could not find support in the specification for the concept of a following area. Figure 4 has labeled "following zone" (emphasis added) with a double arrow, but that zone is not bounded and it is not at all clear that "following zone" coincides or even includes the place of overlap between the two paths.

(Office Action, page 2, lines 16-22). The relevant portion of claim 2 is amended for clarification to "making a following zone extending in a plain view where the first path and the second path substantially overlap." The specification describes as follows:

Here, to nearly overlap refers to that the distance between the position of the central axis of the cylindrical drop and that of the cylinder of a bottomed cylindrical mold is preferably 2 mm or less, when the drop is held in the holding mechanism.

The condition where the rotation paths are overlapped is geometrically illustrated in a schematic plain view of Figure 4, and the rotary moving path of the holding mechanism nearly overlaps with that of the molding die, as schematically illustrated that the holding mechanism and the mold are moved sequentially in a determined and illustrated range.

The movement of the holding mechanism is made to follow that of the molding die (or contrarily, the movement of the molding die is made to follow that of the holding mechanism) on the overlapped rotation path by controlling moving rate or the like, and the holding mechanism is made to operate to insert

and supply the drop held and conveyed into the concave of the molding die by releasing holding, at the point (at following zone in the figure) in which the position of the holding mechanism (the drop holding part) overlaps with that of the molding die (female).

(Specification, page 27, line 18 to page 28, line 6). Figure 4 shows that the path of the holding mechanism coincide with that of the molding die in the “following zone.”

Thus, the specification satisfies the written description requirement under 35 U.S.C. 112, first paragraph.

The Examiner also alleged as follows:

Amended claim 13 recites that “the support is biased outward with respect to a wheel on which the holding mechanism is attached.” The examiner could not find language in the text of the specification to support this concept. Nor could the examiner locate a part labeled “support” in the drawings, so the examiner could not conclude from the drawings that the inventors possessed this concept at the time of filing.

(Office Action, page 3, lines 1-5). The original claim13 recited “the support is biased or held on with being applied force toward the exterior of a wheel on which the holding mechanism is attached.” Also, the specification describes as follows:

In Figure 5-A, **50 is a support** of the holding mechanism 52, 51 is a molding die, and 53 is a guide (a linear slide) integrated into the support 50 of the holding mechanism 52, the support 50 of the holding mechanism 52 is made to move at a determined angle to the normal, 54 is a cam follower attached to the support 50, **the support 50 is made to move along the guide 53 according to the curve of the inner peripheral side of a cam 55**, 55 is an all around cam provided on the rotary-and movable type drop supply so that the drop held by the holding mechanism 52 is made to follow the mold 51, and **56 shows the overlapped range of rotation paths of the holding mechanism and the molding die** which overlap within a determined area. The curve of the inner peripheral side of the cam 55 is designed so that the drop held by the holding mechanism follows the mold 51.

Meanwhile, it is preferable that **the support 50 is tensed by tension springs which are not shown, toward the exterior of the wheel** on which plurality of holding mechanisms 52 are attached, and **the cam follower 54 is set to abut on the inner peripheral side of the cam 55 so that the holding mechanism does not move outward from the position**. The support 50 moves inward and outward along the guide 53 set at a determined angle to the curve and the normal of the cam 55. The configuration of a tension mechanism by the

tension springs is illustrated in Figure 6. Further, an embodiment in which the holding mechanism abuts on the mold according to need to ensure overlap of these positions in Figure 6 etc. can be also selected.

(Specification, page 27, line 22 to page 28, line 6). Thus, the support 50 is made to move along the guide 53 according to the curve of the inner peripheral side of a cam 55, and the support 50 is tensed by tension springs which are not shown, toward the exterior of the wheel, thus, the cam follower 54 is set to abut on the inner peripheral side of the cam 55 so that the holding mechanism does not move outward from the position. It is clear for a person of ordinary skill in the art that the support is biased outward with respect to a wheel on which the holding mechanism is attached so that cam follower 54 moves along the inner side surface of the cam 55.

Thus, the specification satisfies the written description requirement under 35 U.S.C. 112, first paragraph.

The Examiner further alleged as follows:

Amended claim 15 recites that "the holding mechanism is supported by an extension means provided on a conveying media between two circular paths." The examiner could not find any language relating the conveying media's position to two circular paths, nor could the examiner find this in a drawing.

(Office Action, page 2, lines 6-9).

Referring to Fig. 8, the present specification describes as follows:

It is a method or device for supplying a drop in molding die follow-up manner; wherein the holding mechanism on the rotary-and movable type drop supply is supported by the fixing member which is moved by horizontal rotation on the path around the eccentric circle, the rotary moving path is controlled to overlap with the rotation path of the molding die by the controlling guide within a determined area in which the fixing member approaches the rotating molding die, thereby the path is preferably deformed so that the rotation path of the holding mechanism overlaps with circular arch shape of the rotation path of the molding die and the rotation path of the holding mechanism is made to overlap with that of the molding die completely to make the movement of the holding mechanism follow that of the molding die completely or to make the movement of the molding die the follow that of holding mechanism completely.

Specifically, it is adopted as a system, wherein the rotary type **holding mechanism** is supported by **extending and shortening means** provided on a media such as a belt and a chain in a wrapping driving device such as a belt driving device and a chain driving device, at least a part of the circular path whose concentric circle is the same as the circular path on which the movable molding die traces is comprised in the path on which the media traces, and thereby the path of the **holding mechanism** overlaps or nearly overlaps with that of the molding die in a range of the circular path of the concentric circle.

The circular path whose concentric circle is the same as that of movable molding die on which the media traces can be defined by the controlling guide in circular arch form placed **between a belt pulley and a sprocket wheel** or the like of the wrapping driving device.

(page 37, line 23 to page 38, line 22). In Fig. 8, “the first path” is a circular path, and the holding mechanism is supported by an extending means provided on a conveying media between two circular paths with the control guide. Thus, the recitation “the holding mechanism is supported by an extending means provided on a conveying media between two circular paths” has a support in the specification.

Rejection under 35 USC §112, Second Paragraph

Claim 15 was rejected under 35 U.S.C. 112, second paragraph, as being indefinite because mended claim 15 recites that “the holding mechanism is supported by an extension means provided on a conveying media between two circular paths.”

The Examiner alleged as follows:

Amended claim 15 recites that “the holding mechanism is supported by an extension means provided on a conveying media between two circular paths.” It is not at all clear what is meant by this. There appear to be only two circular paths in the disclosure, the second of which is assigned in claim 2 to the holding mechanism. Figure 2 shows that the two circular paths overlap. It is not clear how the conveying media that supports the holding mechanism can be between the two circular paths.

(Office Action, page 3, lines 16-22).

As discussed above, the recitations in claim 15 are based on the structure in Fig. 8. Although claim 15 should not be limited to the particular structure shown in Fig. 8, what claim 15 is meant would be clear to a person of ordinary skill in the art, when claim 8 is read with Fig. 8 in mind.

Rejections under 35 USC §102(b)

Claims 2, 5-6, 10 and 19 were rejected under 35 U.S.C. 102(b) as being anticipated by Saito et al. (US 2002/0088767 A1), henceforth Saito.

Responding to Applicants' previous response, the Examiner alleged as follows:

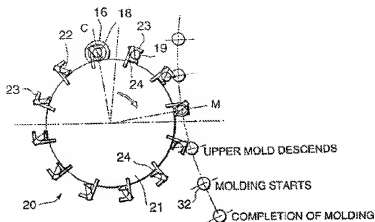
Regarding claim 2, Applicant argues that Saito's first and second paths (the paths of the molding die and the path of the holding mechanism do not overlap. In response to Applicant's argument, Applicant's specification does not provide any special definition of "overlap." In the absence of a special definition, the examiner has interpreted the term broadly to mean any extent of intersection. Saito's figure 9 shows the holding mechanism on top of the mold (figure 9: M); in that place the paths overlap.

Regarding claim 2, Applicant argues that Saito does not teach or suggest a following area. In response to Applicant's argument, as explained above, Saito teaches a place of overlap. That place has been designated the following area. Applicant has not claimed any structural or spatial features to distinguish the claimed following area from what Saito has disclosed.

(Office Action, page 11, lines 7-17).

Claim 2 has been amended to recite "making a following zone extending in a plain view where the first path and the second path substantially overlap."

FIG.9



As shown in Fig. 9 of Saito et al., the path of the grip member 23 and the path of the molding die are in merely **tangential** relation. Thus, Saito et al. does not teach or suggest “making a following zone extending in a plain view where the first path and the second path **substantially overlap**.”

Also, because Saito et al. does not teach or suggest the “following zone,” it also does not teach or suggest “synchronizing the movement of the molding die and the movement of the holding mechanism **in the following zone**; carrying the drop by the holding mechanism **to the following zone**; and transferring the drop from the holding mechanism to the molding die **in the following zone**.”

For at least these reasons, claim 2 patentably distinguishes over Saito et al. Claims 5, 6, 10 and 19, depending from claim 2, also patentably distinguish over Saito et al. for at least the same reasons.

Rejections under 35 USC §103(a)

Claims 9 and 11 were rejected under 35 U.S.C. 103(a) as being obvious over Saito as applied to claim 2 above, and further in view of Winter et al. (U.S. Patent No. 6,152,723), henceforth Winter.

Claim 12 was rejected under 35 U.S.C. 103(a) as being obvious over Saito in view of Winter as applied to claim 11 above, and further in view of Suzuki et al. (U.S. Patent 4,312,437), henceforth Suzuki.

Claim 13/11 was rejected under 35 U.S.C. 103(a) as being obvious over Saito in view of Winter as applied to claim 11 above, and further in view of Choinski (US 2002/0093126 A1).

Claim 13/12 was rejected under 35 U.S.C. 103(a) as being obvious over Saito in view of Winter and Suzuki as applied to claim 12 above, and further in view of Choinski.

Claim 14 was rejected under 35 U.S.C. 103(a) as being obvious over Saito as applied to claim 2 above, and further in view of Vogel et al. (U.S. Patent No. 6,514,448 B1), henceforth Vogel.

Claim 15 was rejected under 35 U.S.C. 103(a) as being obvious over Saito in view of Vogel as applied to claim 14 above, and further in view of Zoppas (U.S. Patent No. 6,422,379 B1).

Claim 16 was rejected under 35 U.S.C. 103(a) as being obvious over Saito in view of Vogel as applied to claim 14 above, and further in view of Winter and Choinski.

Claim 18 was rejected under 35 U.S.C. 103(a) as being obvious over Saito as applied to claim 2 above.

Claims 9, 11-16 and 18 directly or indirectly depend from claim 2. The references, Ingram, Winter et al., Suzuki et al., Choinski, Vogel et al., and Zoppas are not cited for disclosing the “following zone” and they do not disclose the “following zone.” Thus, these references do not remedy the deficiencies of Saito et al. discussed above.

For at least these reasons, claim 9, 11-16 and 18 patentably distinguish over Saito, Ingram, Winter et al., Suzuki et al., Choinski, Vogel et al., Zoppas.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,
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